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T Kaufman

Nov 1965

Philological Methods Applied to
Middle American Languages

- A Chiapanec
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e.g.

H. G

cátu

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araña

i.e.

Honduras Lenca, Guayiquiro

Pinart #278

Ling 2906 Fall 1965

Philological Methods Applied To Middle American Languages

A Chiapanec

KEY	Chiapanec orthography 17thC	Fernández 18thC	Starr ca 1900	Becerra ca 1915	McQuown 1942	Vivó 1942	Westlaner 1942
c	qh	ch	ch	ch	č	č, j	č, j
k	c/qu	c/qu	c	k	k	k	k
mb	mb (nb)	mb (nb)	(m)b	(m)b	^m b	(m)b	^m b
nd	nd	nd	d	(n)d	ⁿ d	nd	(n)d
nj	njh (nyh)	ny	y	(n)y	ⁿ y	(n)y	ⁿ y
ng	ng	ng	g	(n)g	ⁿ g	(n)g	ⁿ g
s	ś (s)	s, c	sh	s	s, φ	s, φ	s, φ
š	x	x					
h	h	h	s, h, t	j	h, x	h, x	h, x
hm	hm	hm		jm	hm	hm	hm
w	u	gu		u, giü	w, gw	gw	w, gw
hw	hu	f(hu)	hsu, ju, tu	ju	x ^w	h ^w , x ^w , f ^w	g ^w , h ^w
~~ny~~ y	y	y (ee)	ee	y	y	y	y
ny	ñ	ñ	ñ	n	ñ, ⁿ y	ñ	ñ
u	o	u	u	u, o	u, o	u, o	u, o

several
hundred

210

57

256

115

140

208

17thC phonemic reconstituted
KEY orthography orthography phonetics

c	gh	c	č
k	c/qu	k	k
mb	mb	mp (or ⁿ b)	ⁿ b ^f b ^f ⁿ p
nd	nd	nt (or ⁿ d)	ⁿ d ^f d (^f ⁿ t)
nj	njh	nc (or ⁿ j)	ⁿ č ^f č (^f ⁿ č)
ng	ng	nk (or ⁿ g)	ⁿ g ^f g ^f ⁿ k
s	ſ	s	^t s ^f s
š	x	š	š
h	h	h	x ^f h
hm	hm	hm (or M)	xM ^f M
w	u	w	g w ^f w
hw	hu	hw (or W)	xW ^f W
y	y	y	y
ny	ñ	ny (or ñ)	ñ
u	o	u	u ^f o

Chiapanec Phonemes (and C, C₂ clusters)

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p	t	c	k	i	u
mp	nt	nc	nk	e	a
	s	(š)	h		
hm					
m	n			š is rare and marginal; possibly to be analyzed as /hy/ or /sy/.	
	ɛ				
	r				
hw					
w		y			
		ny			

17th C Chiapanec orthography
(Albornoz, Núñez, Barrientos)

Fernández, Starr, Becerra

McQuown, Vivó, Weitlaner

Spanish-based

Spanish orthography

Phonetic transcription

Syllable Canon

 $(C_s) C_n V_n (V_s)$ $C_s = h, n$ $C_n = \text{any } C$ $V_n = \text{any } V$ $V_s = i, u (, V_n)$

when $V_n \neq V_s$ only ai, au occur

Probable Additional Phonemic Features

- a) vowel length or gemination; recorded by B, M, V, W; apparently not predictable; there is a good deal of disagreement from one linguist to the other.
- b) glottal stop after final (mostly short) vowels; recorded by M, V, W; apparently ^{ly} not predictable.
- c) an unspecified number of accent (tone) phonemes; recorded sporadically and inconsistently by B, M, V, W; perhaps both vowel length and glottal stop are interrelated with tone.

Other Phonetic Features

nasalization of vowels after nasal consonants; recorded by M, W; in free variation with its absence

B Mangue

Sources	Date	Orthography	Amount
Rocha	1842	Spanish	57
Squier	1852	Sp + Eng	92
Berendt > Brinton	1886	Spanish	357
various > Lehmann	1920	Spanish	128

KEY	Squier	Rocha	Berendt
mb	mb		mb
nd	d	nd	nd
nz	ns	nz	ns
ng	(n)g	(n)g	ng
ht	ht, sht		jt
c	ch		k
hw	hu, uh		hu, ju
hm		sm	jm
s	s	c, s	s, ts
h	h	h, j	h, j
nyu	nu(e)	ñu	nyu

Vowels: Squier

i	i, ee
e	e, a
a	a, ah
o	o
u	u, oo

Mangue Phonemes (and C₁C₂ clusters)

p	t	k	i	u
np	nt	nk	e	o
	s	h		a
	ns			

hm

m

n

~~hm~~

l

~~hw~~

r

~~ny~~

hw

~~ny~~

w

l

y

r

ny

Allophones

np, nt, nk, ns, ny

[ⁿb, ⁿd, ⁿg, ⁿz, ⁿy]

hm, hw

[h_m, h_w]

k

-i

[ç]

s

[t_s ~ s]

B Honduras Lenca or Lenca Proper

Sources of data:

(S) Squier 1858

(P) Pinart 1897

(M) Membreño 1897

Orthography:

English + Spanish

Spanish

Spanish

Distribution of materials:

Amount:

Guacliquiro : M

ca 720 + sentences

: P

ca 720

: S

ca 100

Opatoro : S

ca 100

Intibucat : S

ca 100

Similatlón : S

ca 100

: M

ca 260 + paradigms

Reconstituted Phonemics

Phonemes:

p t <ɬ> k stops (T)

<ɸ> s ʃ <x> spirants (S)

m n
l
r } resonants (R)

w y semivowels (Y)

i u
e o
a } vowels (V)

< > : marginal; occur in loans

Phoneme Sequences:

a) VTTV is only permitted clustering within morphemes

b) morph canons:

(C)V(C)(V)

Reconstituted Allophonics:

p	t	k	are : voiced stops or spirants	V-V, V-C ^{vd}
			: voiceless stops or spirants	V-C ^{ve}
			: voiced stops	N-V
			: voiceless stops	#-V, when geminate
			: any of the above	V-#

	G			O	I	S		
	M	P	S	S	S	S	M	
#pV	p	p, b	p	p	p	p	p	(inc.)
VppV	p	p	p		p	p	p	
VpV	b	b	b	b	b, p		b	
Vp#	b, f	b	b, f	b, v	pu	b	p	
mpV	bsh							
VpsV	psh	pz, bz	ps	psh, ps		ps	fs	
VpkV		pc	fc			fc		
#tV								(inc.)
VttV	t	t, tt	t	t		t	t	
VtV								
Vt#	d	d					t	
ntV		d						
#kV	c	c	c	c, g	c, g		c	(inc.)
VkkV								
VkV	g	g, gg	g	g, c	j, g	c	g, j	
Vk#	g	g, gg	gh	g, h	gh, h	c	j, g	
nKV	gu	gu, gu	gu, g	gu, g	gu		gu	
s	s, z	s	s				s, ss	(inc.)
s	sh	sh, zh, z	sh, s, ss	sh, s	sh, s	sh, s	sh, s	
VkwV	gu	gu					ju	

	M	P	S	S	S	S	M	
w	hu, gü	gü	hu	hu, gü	hu		gü	
y	ɿ, y	y	i	i		i	ɿ, y, iy	(inc.)
n#	n, ng, ngh	n, m	n, ng, ngh	n, ng	n, ng		n, ng	
*ay	ai	aay	ai	ai		ay	ay	
*ey	aɿ, ay	aɿ, ay					eɿ, ey	
*ow	au, aug(h)	au	ahü	ao	ahu		ou	
ew	eu			eu			eu	
a#	a, o	a, o						(inc.)

C Salvador Lenca or Chilanga Lenca

Sources:		Orthography:	Amount
Karl Sapper	1895	Spanish	15
Alcalde of Chilanga	1909	Spanish	16
Atilio Peccorini	ca 1910	Spanish	ca 350 + paradigms
Lehmann	1909	Phonetic	ca 600 + paradigms

Reconstituted Phonemics:

p t s ʃ k obstruents (T)

m n
 e
 r } resonants (R)

w y semivowels (Y)

-x- marginal obstruent

-ʔ- laryngeal (H)

Phonemes occurring only in loans: ʃ f b d g

Phoneme Sequences within Morphemes

#THV

VTHV

VHTV

VHRV

kw, xw are attested medially

Reconstituted Allophonics:

TH:		HT:		medial T:	
p?	[p']	?p	[p]	p	[b]
t?	[t']	?t	[t]	t	[d]
s?	[s']	?s	[s ~ t _s]	s	[z ~ d _z]
ʃ?	[ʃ']	?ʃ	[ʃ ~ t _ʃ]	ʃ	[ʒ ~ d _ʒ]
k?	[k']	?k	[k]	k	[g]
		?m	[hM]	m	[m]
		?n	[hN]	n	[n]
	- #	?l	[hL]	l	[l]
p	- #	?r	[hR]	r	[r]
t	[t ⁿ ~ t]			(kw	[g ^w])
r	[R ⁿ ~ R]			(xw	[x ^w ~ f])
l	[L]				
ʃ	[ʃ ⁿ ~ ʃ]	e	[E]		
n	[ŋ]	o	[Ω]		

Stress Rules:

[CVCV]

[CVCVN]

[CVCVT] ~ [CVCVT]

∴ [CVCVN] / CVCVN /

	A	S	P	L
#[s]V	z	s	s, z	s
#[ʃ]V		x	sh (sch)	ʃ
V[ʃ/tʃ]V			sh (ch)	ʃ
V[hM]V		f _m		x _m
V[hN]V			sn(n)	sn, xn
[r]		r	r	r, R
V[hR]V	rr		rr	RR, rxr
V[hL]V			sl	sl
[w]			w, gu, u	ŭ, u
[y]			y, i	y, ĭ, i
V[ŋ]#		ng	n	ŋ
[x]			j	x, x̃
[E]		e	e	e, ε
[Ω]		o	o	o, ɔ

	A	S	P	L
V[ʒ]#				
V[t]#			t	t, t ⁿ
V[r]#			r	R ⁿ , R ^{xn}
V[L]#			l	L
[p]				p, Ø
[t']		Ø	t', t	t'
[tʰ]		tʰ	tʰ, ts(s) (sh)	tʰ(sʰ) (tʰʰ)
[ʃ]			tʰʰ	tʰʰ (tʰʰ)
[kʰ]		c	kʰ, k, c, c	kʰ, Ø
V[b]V			b, v	b
V[d]V			d	d
V[z/dz]V		tʰ	ds, s	z
V[ʒ/dʒ]V			sh, y, i (rr)	ʒ
V[g]V		g	g	g
V	V	V	V	V, V'

E. Xinca

Lg	Source	Place	Date	Amount
A	Valdez	Yupiltepec	1868	ca 85
	Valdez	Jutiapa	1868	ca 85
	Sapper	Yupiltepec	^{copied} 1910	ca 370
	Calderón	Yupiltepec	1908	ca 660
B	Gavarrete	Sinacantán	1868	ca 85
	Sapper	Chiguimulilla	^{copied} 1910	ca 370
	Calderón	Chiguimulilla	1908	ca 660
	Fernández	Guazacapán	1938	ca 1400

All sources use Spanish orthography

Reconstituted Xinca Phonology

Xinca A

p t c k
s #š h

m n
l -L-
-r- -R-

w y

i á u
é a ó

í

Xinca B

p t c k
<s> š h

m n
l -L-
-r-

w y

i á u
é a ó

í

lš | [š], [ṣ̌]

lp t k | N- are voiced

lcl [ɸ], [ɤ]

lcl [ɸ], [ɤ]

lw | [w], [ɣ], [β]

lw | [w], [ɣ], [β]

Sound	Sapper	Calderón	Fernández
Λ	ü	ü, ö, üö	ü, ö, eu, iu
c	tz, ch	tz', ch	tz, ch, tch
w	vu, cvu, b	hu, gü, g	hu, gü, b, g
h	h	j, f	j, f
ĩ	i, e	i, e	l, e
ũ	u, o	u, o	u, o
-L-	jl	jl, lj	jl, sl, xl, jsl, lj
-R- (A)	rr, r	rr	—
-s (A)	s	s	—
#š (A)	x	x, #r	—
š (B)	x	#r, -rr-, x	x, ss, s, #r, -rr-

20 (*15)

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F. Matagalpa

Two types, Cacaoopera (A) and Matagalpa (B)

Type	Source	Date	Amount	Orthography
A	Mendoza	1895	199	Spanish
	Sapper	1895	166	Spanish
	Lehmann	1910	ca 550	systematic phonetic
B	Noguera	1855	97	Spanish
	Valle	1909	87	Spanish

Reconstituted Phonemics

p t k i u
 b- d- a
 s š x
 m(-) n ʋ
 l
 -r-
 w(-) ɣ(-)

marginal sounds:

where (A) has |š|,
 (B) has |ɣ|.

é in one interjection

č in loans

k̂ in one or two loans

Reconstituted Phonetics

n# nt ~ n · ~ n

p# p^m ~ p

t# tⁿ ~ t

s# sⁿ ~ s

-b- b ~ β otherwise stated: /b/ may be spirantized after V

и $f_{\text{ин}} \approx 0$ (А); 0 (В)

medial $u(A)$; $o(B)$

γ final $i \in e(A); e(B)$

medial $i(A); i(B)$

$$a \quad -y, -y \quad a \sim x \sim \varepsilon$$

p (t) (k) s (m) n l (s) may be slightly lengthened
in $\check{V}-V$

#p, t - $\check{v}$ are lenis

Length:

Lehmann frequently hears stressed vowels and pretonic vowels in open syllables as long. None of the other sources marks length in any way. Since many of the forms are marked by L both with and without length, it is assumed to be non-distinctive.

Sound	M	S	L	N	V
#p - $\checkmark$	p	p	p		
#p - $\check{\check{v}}$	p	b	p		
#t - $\checkmark$	t	t(d)	t		
#t - $\check{\check{v}}$	t	d	t		
#k - $\checkmark$	c, k	c, qu, k ²	k		
#b - $\checkmark$	b	b	b		
#d - $\checkmark$	d	d(nd)	d		
s $\check{\check{v}}-\check{\check{v}}$	s	ss	s		
s $\check{\check{v}}-\check{\check{v}}$	s, ss	s	s		
p $\check{\check{v}}-\check{\check{v}}$	pp	p	p	p, pp	p
p $\check{\check{v}}-\check{\check{v}}$	p	p	p		
t $\check{\check{v}}-\check{\check{v}}$	t	t	t		
t $\check{\check{v}}-\check{\check{v}}$	t	t(d)	t		
k $\check{\check{v}}-\check{\check{v}}$	c	c, qu	k		
b $\check{\check{v}}-\check{\check{v}}$	b, v	b, v	b		b
b $\check{\check{v}}-\check{\check{v}}$		b	b		
b $\check{\check{v}}-\check{\check{v}}$	b	b	b		
d $\check{\check{v}}-\check{\check{v}}$	d		d		
m $\check{\check{v}}-\check{\check{v}}$	m	m	m		m
n $\check{\check{v}}-\check{\check{v}}$	n	n, nn	n	n	
n $\check{\check{v}}-\check{\check{v}}$	n	n	n		
l $\check{\check{v}}-\check{\check{v}}$	l	l, ll	l		
l $\check{\check{v}}-\check{\check{v}}$	l	l	l	l	

Sound	M	S	L	N	V
p# $\checkmark$ -		pm	p ^m	p	
t# $\checkmark$ -	t	t, th, t ⁿ	t ⁿ , t		
k# $\checkmark$ -	c	c	k		
n# $\checkmark$ -	n	n, nn, n̄	n, nt	n	n
n# $\checkmark$ -	n	n	n, nt		
#s $\checkmark$ -		r, rr	ř, ř		
s $\checkmark$ - $\checkmark$	rr	r, rr	řř		
s $\checkmark$ - $\checkmark$	rr	rr	řř, ř, rr, r(r)		
s $\checkmark$ - $\checkmark$	rr	r	řř		
s# $\checkmark$ -	r, s	rx, rrx	řř, ř, ř ⁿ		
#x $\checkmark$ -			x		
x $\checkmark$ - $\checkmark$	j	j	x		
# $\checkmark$ -	h, a	a	a		
#č -	ch	ch	č, č		
-č -	ch	ch	č		
k̂		k̂	k̂		
é	é	é	é		

Sound	M	S	L	N	V
#í-	i	i	i		
#ĩ-	i	i	i		
-ĩ-	i	i	i	i	i
-í#	i	i	i		
-ĩ#	i,e	i,e	i,e	e	e
#ú-	u	u	u		
#ũ-	u	u	u		
-ũ-	u,o	u,o	u,o	o	o
-ú#	u	u	u		
-ũ#	u,o	u,o	u,o	o	o
-ú- -k#	u	u	u,o		
#yá-	ye,ya	ye,ya	ye,ya		
-uá-	o	ó	ó,o,wá	ué(-y)	oá
-iá-	ia	ié	i'é	ia	lá
-ai-	ay,ai	ai	ai	ai,éi	ái
-au-	áu	áu	áu,áu		
-ui-		uy	ui		
-u-	ihú, eo		í·u, iú, io		
yáu	yáu	yáu	yáo	ya ^u	yaú.

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Sound	M	S	L	N	V
-sw-			sw, zw		
-eb-	eb		lb, lw		
-tk-		tk	tk, tk'		
-nd-	nd		nd		
-tb-	db	tp	tb	tb	
-kt-		t	kt	ct	
-sn-	sn	sn	sn		
-lk-	lc, lk	lc	lk		
-sm-	sm	sm	sm		
-nk-	nk		nk		
-sk-	sk		sk		
-nt-	nt	nt		nt	nt
#dr-				dr	dr
-hy-				ji	

G. Tapachultec

Source	Abbr	Date	Amount
Sapper	M	ca 1920	ca 75 (?)
Sapper	S	ca 1890	ca 150
Krause	K	ca 1910	ca 30 (?)
Rieke	R	ca 1900	ca 35
Johnston	J	ca 1880	ca 120

All sources use Spanish orthography

Reconstituted Phonemes

p	t	ɸ	ɛ	k	ʔ
			ʒ		h
m	n				
w			y		
i	ʌ	u		✓	
e	a	o			

Sound	M	S	K	R	J
í	í	í	í	í	í
í _#	v	v	V(Vg)	v	V(Vg)
í # _	v	v	v	V(gV)	V/h
i	i	i	i	i	i
e	e	e(è,ö)	e	e	e
a	a	a(a')	a	a	a
o	o	o(u)	o	o	o(u)
u	u	u(u')	u	u(o)	u(o)
á	o	o(ö)	o	o(u)	u/o(un)
ä	e/ó/o	ö/o	—	—	e(i,o)
ɔ̃ -C	ɔ̃/j(c)	(k/c,t)	(g)	(g)	(t,c)
ɔ̃ _#	ɔ̃(ɔ̃)	ɔ̃/ɔ̃	ɔ̃(t)	ɔ̃(g)	c/t/ɔ̃
í' -C	V(V, V')	V, V' / V ^c	V	—	V _c

Unmarked stress is assumed to follow the rules of Spanish orthography

Sound	M	S	K	R	J
k -i/e	qu(k')	k'/qu(k'w)	(qu)	(cu)	qu
k -a/o/u/ɛ	g/c/k(c')	c/k(h,k)	c/g	c(g)	c/g
k -#	c/k	c/k	g/c	c/ɔ	que/tca/c ^(w)
p	p/b(v)	p/b	p/b(pf)	p/b	p/b
t	t/d	t/d	t	t	t
m	m	m	m	m	m
n non-final	n	n	n	n	n
n -#	ng/n(m)	ng/n	n	n(m)	n(m, nt)
h V-V	j(h)	(j)h	j	h(f)	j(h)
h V-C	j	j		(j)	
h V-C	(x, ɔ)	j(ɔ)	ɔ	j(ɔ)	ɔ
ɬ #-, V-V	} tz(ts)	tz	z(s)	ts	z/ch x/ts
ɬ -C, -#					
ɕ	ch	ch	—	(tx, ch)	ch
ʃ	x	x(s)	x	x	ch/z(c(xch))
y #-, V-V	y	y	} y	y(j)	y/le
y -C, -#	i(y)	i(y, 'i)			
w #-, V-V	vu/v(u)	v/u	—	—	(hu, gi)
w -C, -#	u	u	u	(u)	u(hu)

Sample of Format for Presenting Lexical
Materials: Chilanga Lenca

- 4as[?]uwan deer : P.78 at^snan; L.243n á·t^sú·an
 4apan mat (petate) : P.24 ában; L.196n á·băn
 4ala[?] hair : P.44 ála; L.12n pi-á·la ('our—'),
 pi-aláx-na ('our—'), alá·t-na = alá·tⁿa
 ('the—'), L.69n i-á·la ('his—')
 4ala blood : L.45n á·la, alá·-na ('the—')
 4amap snake (p~~et~~a 3,94 amáp; L.308n á·măp,
 L.309n, 310n, 311n á·map
 4aw leaf : P.109 iyan ('its—'); L.334n á·u

x x x x

- 4k[?]ama calabash (jícara, guacal): P.33 čama; L.182n
 ká·ma, L.184n ká·ma
 4k[?]in road : L.133n k[?]in, L.129n k[?]í·y-na ('the—')
 4k[?]omo belly : P.57 lčcomó-na ('his—'); L.36n
 omó·-na ('the—'), ma·-k[?]omó·-na ('thy—')
 4k[?]uwa rat/mouse : P.80 cúa; L.260n k[?]ú·ua, L.261n
 k[?]ú·a

etc.

Areas where work has been done or is
being done

Broadbent	+ Rumsen
Granberry	+ Timucua
Hymes	+ Kathlamet Chinook
Grekooff	+ Chimariko
Kraus	several + N. Athabaskan languages
Kaufman	+ Chiapanec
	+ Mangue
	+ Tapachultec
	+ Xinca A
	* Xinca B
	* Honduras Lenca
	* Chilanga Lenca
	* Mandan
	* Matagalpa (= Cacaopera)

+ = dead

* = at least moribund

? = unknown

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Areas where work could be done

(a) multiple sources

- + Alsea
- * Chinook Jargon
- + Achumawi
- + Costanoan (various languages)
- * Yukian (minus Wappo)
- + Chumashan (minus Barbareño)
- * Huron (=Wyandot)
- + Tutelo
- + Biloxi
- + Atakapa
- + Comecrudo
- + Karankawa
- + Cuitlatec
- + Chicomuceltec
- ? Paya
- ? Misquito
- ? Sumu (=Ulua)
- * Subtiaba

(b) single extensive sources

- * Kalapuya
- + Tillamook
- + Ofo
- + Coahuiltec
- + Chibcha